

Mouse IL1R1 / CD121a Protein (His Tag)

Catalog Number: 50807-M08H



Sino Biological
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General Information

Gene Name Synonym:

CD121a; CD121b; IL-1R1; IL-1R; IL1r-1

Protein Construction:

A DNA sequence encoding the mouse IL1R1 (P13504) extracellular domain (Met 1-Lys 338) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to bind mouse IL1B in a functional ELISA. 2. Immobilized mouse IL1A at 10 µg/mL (100 µl/well) can bind mouse IL1R1, The EC₅₀ of mouse IL1R1 is 0.13 µg/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Leu 20

Molecular Mass:

The secreted recombinant mouse IL1R1 comprises 330 amino acids and has a calculated molecular mass of 38.7 kDa. As a result of glycosylation, the apparent molecular mass of the recombinant protein is approximately 55-60 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

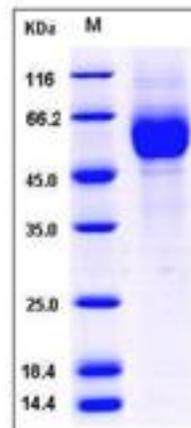
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Interleukin 1 receptor, type I (IL-1R1) also known as CD121a (Cluster of Differentiation 121a), is an interleukin receptor. IL-1R1/CD121a is a cytokine receptor that belongs to the interleukin 1 receptor family. This protein is a receptor for interleukin alpha (IL1A), interleukin beta (IL1B), and interleukin 1 receptor, type I (IL1R1/IL1RA). IL-1R1/CD121a is an important mediator involved in many cytokine induced immune and inflammatory responses. This protein has been characterized by pharmacological and molecular techniques in the mouse brain. The spindle-shaped astrocytes enclose the wound, separating the healthy from damaged neural tissue. The shape change and subsequent repair processes are IL-1β activity-dependent, acting through the IL-1 type 1 receptor (IL-1R1), as co-application of the IL-1 type 1 receptor antagonist protein (IL-1ra) blocks IL-1β induced effects. In the spleen, a slight increase in IL-1R AcP and IL-1R1 was observed during the first hours following LPS stimulation. In conclusion, IL-1R AcP mRNA is expressed in the brain and in other tissues where IL-1R1/CD121a transcripts are found. However, the regulation of its expression is distinct from IL-1R1/CD121a. The high level of expression and the lack of regulation of IL-1R AcP transcripts in the brain under inflammatory conditions suggest that the protein might be constitutively expressed in excess.

References

1. Dale M, *et al.* (1999). "Interleukin-1 receptor cluster: gene organization of IL1R2, IL1R1, IL1RL2 (IL-1Rrp2), IL1RL1 (T1/ST2), and IL18R1 (IL-1Rrp) on human chromosome 2q". *Genomics* 57 (1): 177-9.
2. Joos L, *et al.* (2001). "Association of IL-1beta and IL-1 receptor antagonist haplotypes with rate of decline in lung function in smokers." *Thorax* 56 (11): 863-6.
3. Vigers GP, *et al.* (1997). "Crystal structure of the type-I interleukin-1 receptor complexed with interleukin-1beta." *Nature* 386 (6621): 190-4.

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